Grade 5 Math

Subclaim: Supporting Content

The standard designation is included preceding each evidence statement.
Evidence Statements may:
1. Use exact standard language
2. Be derived by focusing on specific parts of a standard
3. Be integrative - the testing of more than one of the standards on a single item/task without going beyond the standards to create new requirements

Evidence Statements	Clarifications	Relationship to Mathematical Practices
Operations and Algerbaic Thinking (OA)		
5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	●Expressions have depth no greater than two, e.g., 3x[5 + (8 ÷ 2)] is acceptable but 3x[5 + (8 ÷ {4-2})] is not.	MP.7
5.OA.2-1 Write simple expressions that record calculations with numbers. For example, express the calculation “add 8 and 7, then multiply by 2” as 2 x (8 + 7).	●Write simple expressions that record calculations with numbers. For example, express the calculation “add 8 and 7, then multiply by 2” as 2 x (8 + 7).	MP.7
5.OA.2-2 Interpret numerical expressions without evaluating them. For example, recognize that 3 x (18932 + 921) is three times as large as 18932 + 921 without having to calculate the indicated sum or product.		MP.7
5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.		MP.3, MP.8
Measurement and Data (MD)		
5.MD.1-1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m).		MP.5, MP.6
5.MD.1-2 Solve multi-step, real world problems requiring conversion among different-sized standard measurement units within a given measurement system.	●Multi-step problems must have at least 3 steps.	MP.1, MP.6

5.MD.2-2 Use operations on fractions for this grade (knowledge and skills articulated in 5.NF) to solve problems involving information in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.	●Tasks requiring students to produce a line plot should only involve fractions 1/2, 1/4, or 1/8.	MP.5, MP.6
Geometry (G)		
5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and xcoordinate, y-axis and y-coordinate).	●Tasks assess student understanding of the coordinate plane as a representation scheme, with essential features as articulated in standard 5.G.1. ●It is appropriate for tasks involving only plotting of points to be aligned to this evidence statement. ●Coordinates must be whole numbers only	MP.2, MP.5
5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.		MP.1, MP.5
5.G.3 Classify two-dimensional figures in a hierarchy based on properties	●A trapezoid is defined as "A quadrilateral with at least one pair of parallel sides."	MP.5, MP.7
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Word Problems (Int)		
5.Int.1 Solve one-step word problems involving multiplying multi-digit whole numbers	●The given factors are such as to require an efficient/standard algorithm (e.g., 726 x 4871). Factors in the task do not suggest any obvious ad hoc or mental strategy (as would be present for example in a case such as 7250 x 400). ●For purposes of assessment, the possibilities for multiplication are 1-digit x 2- digit, 1-digit x 3-digit, 2-digit x 3-digit, 2-digit x 4-digit, or 3-digit x 3-digit. ●Word problems shall include a variety of grade-level appropriate applications and contexts.	MP.1, MP.7

5.Int.2 Solve word problems involving multiplication of three two-digit numbers	●The given factors are such as to require an efficient/standard algorithm (e.g., 76 x 48 x 39). Factors in the task do not suggest any obvious ad hoc or mental strategy (as would be present for example in a case such as 50 x 20 x 15). ●Word problems shall include a variety of grade-level appropriate applications and contexts.	MP 1, MP 7